



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/612,969	03/04/1996	DENNIS W. NUSSE	1231-12	8205

7590

10/18/2002

CHARLES W CALKINS
KILPATRICK STOCKTON L.L.P.
1001 WEST FOURTH STREET
WINSTON SALEM, NC 27101

EXAMINER

NGUYEN, ANTHONY H

ART UNIT

PAPER NUMBER

2854

DATE MAILED: 10/18/2002

#37

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/612,969

Applicant(s)

NUSSER, DENNIS W.

Examiner

Anthony H Nguyen

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-19,21-25,27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-19,21-25,27 and 28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of keys having functions "up, down...escape..." (claims 6 and claim 23) and symbols such as "~!@#\$\$%^...? or ?" (claim 23 and claim 25) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on August 08, 2002 have been disapproved because they introduce new matter into the drawings. 37 CFR 1.121(a)(6) states that no amendment may introduce new matter into the disclosure of an application. The original disclosure does not support the showing of the layout for a fixed key input apparatus as shown in the proposed Fig.3. Therefore, the proposed drawing of Fig.3 is not approved, and the drawing objection to claims 6 and 23 is repeated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6,9-19,21-25, 27 and 28 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over Herzog et al. (US 4,669,903) in view of Wang (US 5,334,976) and Christopher et al. (US 4,075,679).

Herzog et al. teaches an input apparatus having substantially the structure as claimed. Herzog et al. teaches a keyboard having a plurality of keys which generate input signals including a plurality of numerals and letters of English alphabet as shown in Figs.1 and 2 of Herzog et al. Herzog et al. fails to state or teach clearly the vertical and horizontal spacing between the input keys. However, Wang teaches an input apparatus having a plurality of keys in which a minimum center-to-center horizontal spacing in the range of 12-19 mm and a vertical spacing of 18-21 mm for the keys such as Shift, Control and Alter (Wang, the paragraph bridging cols.4 and 5 and col.5 second paragraph). Note that the spacing is obviously smaller for the alphanumeric keys 26-28 as shown in Fig.1 of Wang. Note also that the widths and depths of the keys of a standard keyboard is about 12 mm which are also in the range as claimed. Christopher et al. teaches a keyboard having a full complement of alphanumeric keys and function keys as shown in the Figure (Front page). In view of the teachings of Wang and Christopher et al., it would have been obvious to one of ordinary skill in the art to modify the keyboard of Herzog et al. by providing the minimum center-to-center horizontal and vertical spacings between the input keys as taught by Wang and Christopher et al. for convenience of typing. With respect to claims 1,21,22,and 27, the selection of a desired keystroke travel range involves only an obvious matter of design choice based upon obvious experimentation. This obviousness is evidenced by the fact that applicant recognizes that the conventional keystroke travel range is about 1.5-6 mm (the specification, page 10 lines 20-24). With respect to claims 6,14,18, and 25, each of the patents to Wang and Christopher et al. teaches a plurality of keys having the functions as recited.

Response to Arguments

Applicants' arguments filed on August 8, 2002 have been fully considered but they are not persuasive of any error in the above rejections. Applicant argues that Herzog et al., Wang, and Christopher et al. fail to teach the fixed key input apparatus as claimed. Specifically, applicant argues that Herzog et al. and Christopher et al. fail to teach the keyboard having a smaller keys, smaller key spacing and a key which has a reduced keystroke travel range. Also, applicant argues that while Wang teaches a keyboard smaller than average keyboard, Wang fails to teach the keys which can be used by a user's finger. Further, applicant argues that there is no suggestion or motivation in Herzog et al., Wang and Christopher et al. to modify or combine the references. However, as explained above, Herzog et al. teaches a key input apparatus having a plurality of keys which generate input signals corresponding to each of numeral and alphabet keys so that the apparatus can be operated with both hand by touch. While Herzog et al. does not state clearly the vertical and horizontal spacing between the keys and the keystroke travel range of each key, Wang teaches the keyboard having minimum center-to-center horizontal and vertical spacing between input keys within the range as claimed. While the keyboard of Wang is used with a stylus for comfortably operating the keyboard, one ordinary skill in the art would recognize that the keyboard of Wang can be operated by users' fingers since the smallest key 108 (Wang, Fig.4f) has a dimension of 10.64 mm x 8.26 mm.. Note also that the recited horizontal and vertical spacing between keys are also rendered obvious with respect to the horizontal and vertical spacing of a conventional keyboard. Applicant argues that Herzog et al. does not teach a reduced key stroke and the reduced stroke travel range is not an obvious matter of design choice. However, the key's stroke travel range as claimed is within the key's stroke travel range of a conventional keyboard which has a range of 1.5- 6 mm.

Art Unit: 2854

Therefore, the keystroke travel range as recited is conventional. Christopher et al. is cited to show the conventional small keyboard having a full complement of alphanumeric keys and function keys that include the symbols as claimed in claim 23. Applicant also argues that there is no suggestion or motivation to combine the references as applied. Note that it is not a requirement for obviousness that the motivation to combine references be found exclusively in the primary reference. Instead, the requisite motivation to combine may stem from teachings, suggestions or inferences in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art. Therefore, the rejections are proper. There is no apparent unobviousness in the structure claimed relative to the structure of the prior art as applied.

Conclusion

Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Art Unit: 2854

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Nguyen whose telephone number is (703) 308-2869.

The examiner can normally be reached daily from 9 AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld, can be reached on (703) 305-6619. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

A handwritten signature in cursive script that reads "Anthony Nguyen".

Anthony Nguyen
10/17/02
Patent Examiner
Technology Center 2800